Please amend the Application as follows.

Amendments to the claims:

The following claim listing will replace all previous listings in the application:

1. (Currently amended) Process for the optical writing ~~of~~ and optical reading of ~~optically readable~~ digital information in a two-dimensional extended storage medium, the process comprising the steps of:

1) ~~wherein on account of the optical writing process~~ modifying by optical writing the surface topography of ~~the~~ a storage medium ~~is suitable for the optical reading process, and is sufficiently modified~~ so that a depression of at least 10 nm and a width, measured on the original surface, of less than 10 µm is achieved in one direction,

wherein the writing is carried out using a focused laser beam with an energy density of a light pulse between 1 mJ/cm^2 and 100 J/cm^2 and with an intensity of between 0.15 mW and 100 mW, and

2) optically reading the digital information on the storage medium by detecting changes in the surface topography,

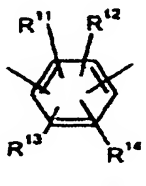
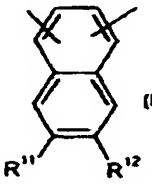
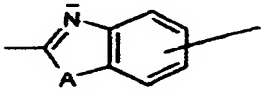
wherein the reading is carried out with an optical imaging system which can detect interference between beam portions originating from parts of the scanned sample spot lying at different depths, and

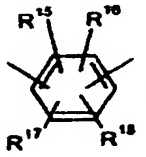
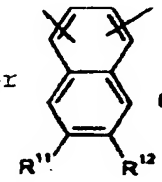
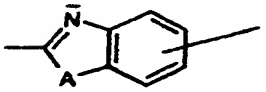
~~without substantial portions of the detected signal resulting from a degradation and/or a physical or chemical modification of the areas adjacent to the absorber layer,~~

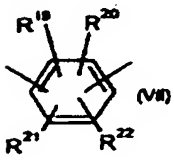
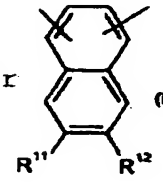
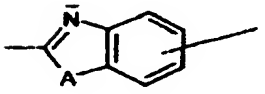
~~wherein the writing is carried out using a focused laser beam with an energy density of a light pulse between 1 mJ/cm^2 and 100 J/cm^2 and with an intensity of between 0.15 mW and 100 mW, and~~

wherein as light-active polymer films side-chain polymers, optionally block polymers and/or graft polymers are used, to which dyes are bound as side chains via a STQ-spacer (formula I) and dimensionally anisotropic groups are likewise bound via a STQ-spacer (formula II), wherein formula I has the structure

$$—S^1—T^1—Q^1—X^{1'}—Ar^1—(—X^{2'}—Ar^2—)_y— (—X^{3'}—Ar^3—)_z—X^4 \qquad (I)$$

where -Ar¹- =  (III) or  (IV) or  (V)

where -Ar²- =  (VI) or  (IV) or  (V)

where -Ar³- =  (VII) or  (IV) or  (V)

in which

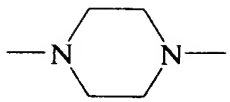
y denotes 1 or 2,

z denotes 0, 1 or 2 and

$X^{2'}$ and Ar^2 and/or $X^{3'}$ and Ar^3 may have different meanings, if y and/or z denote 2,

A denotes O, S or N-C_1- to C_4-alkyl,

Q^1 denotes -O-, -S-, -(N-R^5)-, -C(R^6R^7)$_p$, -(C=O)-, -(O-CO)-, -(NR^5-CO)-, -(SO_2)-, -(O-SO_2)-, -(NR^5-SO_2-)-, -(C=NR^8)-, -(CNR^8-NR^5)-, -O-C_6H_5-COO- or a bivalent radical of the formula



T^1 denotes $-(CH_2)_p-$, wherein the chain may be interrupted by -O-, $-NR^9-$, or $-OSiR^{10}{}_2O-$ and may be substituted by methyl,

S^1 denotes a direct bond, -O-, -S- or $-NR^9-$,

P denotes an integer from 2 to 12, preferably 2 to 8, in particular 2 to 4,

R^9 denotes hydrogen, methyl, ethyl, or propyl,

R^{10} denotes methyl or ethyl,

R^{11} to R^{22} independently of one another denote hydrogen or a non-ionic substituent,

X^4 denotes hydrogen, halogen, cyano, nitro, CF_3, CCl_3, $-COO-C_1-$ to C_4- alkyl or $X^{4'}-R^4$,

$X^{1'}$, $X^{2'}$ $X^{3'}$ and $X^{4'}$ denote a direct bond, -O-, -S-, $-(N-R^5)-$, $-C(R^6R^7)-$, $-(C=O)-$, $-(CO-O)-$, $-(CO-NR^5)-$, $-(SO_2)-$, $-(SO_2-O)-$, $(SO_2-NR^5)-$, or $-(CNR^8-NR^5)-$ and

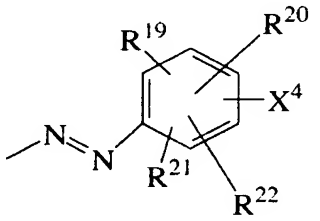
$X^{2'}$ and $X^{3'}$ may in addition denote $-(C=NR^8)-$, -(N=N)- and at least one of the groups $X^{2'}$or $X^{3'}$ denotes -N=N-,

R^4, R^5, R^6, R^7 and R^8 independently of one another denote hydrogen, C_1- to C_4- alkyl, or C_6- to $C_{10}-$aryl and

R^4 and R^5 in addition independently of one another denote C_1- to $C_{20}-$alkyl-(C=O)-, C_3- to $C_{10}-$cycloalkyl-(C=O)-, C_2- to $C_{20}-$alkenyl-(C=O)-, C_6- to $C_{10}-$

aryl-(C=O), C_1- to C_{20}-alkyl-(SO_2)-, C_3- to C_{10}-cycloalkyl-(SO_2), C_2- to C_{20}-alkenyl-(SO_2)- or C_6- to C_{10}-aryl-(SO_2), wherein

by the term non-ionic substituents are understood halogen, cyano, nitro, C_1- to C_{20}-alkyl, C_1- to C_{20}-alkoxy, phenoxy, C_3- to C_{10}-cycloalkyl, C_2- to C_{20}-alkenyl, C_6- to C_{10}-aryl, C_1- to C_{20}-alkyl-(C=O)-, C_6- to C_{10}-aryl-(C=O)-, C_1- to C_{20}-alkyl-(SO_2)-, C_1- C_{20}-alkyl-(C=O)-O-, C_1- to C_{20}-alkyl-(C=O)-NH-, C_6- to C_{10}-aryl-(C=O)-NH-, C_1- to C_{20}-alkyl-O-(C=O)-, C_1- to C_{20}-alkyl-NH-(C=O)-, C_6 to C_{10}-aryl-NH-(C=O)- or a radical of the formula



(VIII)

and the alkyl, cycloalkyl, alkenyl and aryl radicals in turn may be substituted by up to 3 radicals from the group comprising halogen, cyano, nitro, C_1- to C_{20}-alkyl, C_1- to C_{20}-alkoxy, C_3- to C_{10}-cycloalkyl, C_2- to C_{20}-alkenyl or C_6- to C_{10}-aryl, and the alkyl and alkenyl radicals may be straight-chain or branched, and

by the term halogen is understood fluorine, chlorine, bromine and iodine,

and formula II is described by

$$—S^1—T^1—Q^1—X^{1'}—Ar^1—(—X^{2'}—Ar^2—)_y— (—X^{3'}—Ar^3—)_z—X^4 \qquad (I)$$

wherein the above substituent definitions (formula I) are also valid for formula II, with the proviso that none of the groups $X^{2'}$ or $X^{3'}$ may denote -N=N- and R^{11} to R^{22} may not denote a radical of the formula (VIII).

2. (Previously presented) Process according to claim 1, wherein polymer films are used as storage medium.

3. (Previously presented) Process according to claim 1, wherein a multi-layer disk is used as storage medium, which comprises at least one mechanically sufficiently stable substrate, at least one polymer film forming the light-active layer, and a covering layer.

4. (Previously presented) Process according to Claim 1, in which a storage medium is used and the light-active layer predominantly comprises oligomers and/or polymers containing dyes that orientate under the action of light.

5. (Previously presented) Process according to Claim 3, wherein a polymer film whose mass density is closely matched to that of the light-active layer is used as covering layer.

6. (Canceled)

7. (Previously presented) Process according to claim 1, wherein the dye side groups I are used, wherein substituents and formulae have the meanings defined in claim 1, and in addition

Ar^1 denotes a radical of the formula (III),

Ar^2 denotes a radical of the formula (VI),

Ar^3 denotes a radical of the formula (VII) or (V),

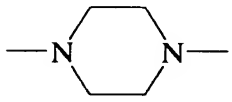
y denotes 1 or 2,

z denotes 0, 1 or 2 and

$X^{2'}$ and Ar^2 and $X^{3'}$ and Ar^3 may have different meanings if y and/or z denote 2,

A denotes O or S,

Q^1 denotes -O-, -(N-R^5)-, -(C=O)-, -(O-CO)-, -(NR^5-CO)-, -(SO_2)-, -(O-SO_2)-, -(NR^5-SO_2-)-, -O-C_6H_5-COO- or a bivalent radical of the formula



T^1 denotes -$(CH_2)_p$- wherein the chain may be interrupted by -O-, -NR^9-, or -$OSiR^{10}{}_2O$- and may be substituted by methyl,

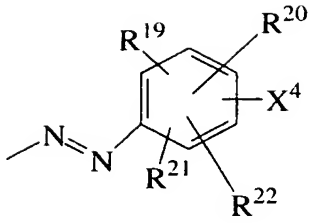
S^1 denotes a direct bond, -O-, -S-, or -NR^9-

p denotes an integer from 2 to 8, in particular 2 to 4,

R^9 denotes hydrogen, methyl or ethyl,

R^{10} denotes methyl or ethyl,

R^{11} to R^{22} independently of one another denote hydrogen, halogen, cyano, nitro, C_1- to C_{20}-alkyl, C_1- to C_{20}-alkoxy, phenoxy, C_3- to C_{10}-cycloalkyl, C_2- to C_{20}-alkenyl, C_6- to C_{10}-aryl, C_1- to C_{20}-alkyl-(C=O)-, C_6- to C_{10}-aryl-(C=O)-, C_1- to C_{20}-alkyl-(SO_2)-, C_1- to C_{20}-alkyl-(C=O)-O-, C_1- to C_{20}-alkyl-(C=O)-NH-, C_6- to C_{10}-aryl-(C=O)-NH-, C_1- to C_{20}-alkyl-O-(C=O)-, C_1- to C_{20}-alkyl-NH-(C=O)-, C_6- to C_{10}-aryl-NH-(C=O)- or a radical of the formula



(VIII)

X^4 denotes hydrogen, halogen, cyano, nitro, CF_3, CCl_3, -COO-C_1 to C_4-alkyl or $X^{4'}$-R^4,

$X^{1'}$, $X^{2'}$ $X^{3'}$ and $X^{4'}$ denote a direct bond, -O-, -(N-R^5)-, -C(R^6R^7)-, -(C=O)-, -(CO-O)-, -(CO-NR^5)-, -(SO_2)- or (SO_2-O)- and

$X^{2'}$ and $X^{3'}$ may in addition denote -(N=N)- and at least one of the groups $X^{2'}$ or $X^{3'}$ denotes -N=N-,

R^4, R^5, R^6, R^7 and R^8 independently of one another denote hydrogen, C_1- to C_4-alkyl, or C_6- to C_{10}-aryl and

R^4 and R^5 in addition independently of one another denote C_1- to C_{20}-alkyl-(C=O)-, C_3- to C_{10}-cycloalkyl-(C=O)-, C_2- to C_{20}-alkenyl-(C=O)-, C_6- to C_{10}-aryl-(C=O)-, C_1- to C_{20}-alkyl-(SO_2)-, C_3- to C_{10}-cycloalkyl-(SO_2)-, C_2- to C_{20}-alkenyl-(SO_2)-, or C_6- to C_{10}-aryl-(SO_2)-.

and dimensionally anisotropic side groups II are used wherein substituents and formula have the meanings defined in claim 1, and in addition

Ar^1 denotes a radical of the formula (III),

Ar^2 denotes a radical of the formula (VI),

Ar^3 denotes a radical of the formulae (VII) or (V),

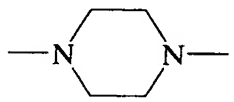
y denotes 1 or 2,

z denotes 0, 1 or 2 and

$X^{2'}$ and Ar^2 and/or $X^{3'}$ and Ar^3 may have different meanings if y and/or z denote 2,

A denotes O or S,

Q^1 denotes -O-, -(N-R^5)-, -(C=O)-, -(O-CO)-, -(NR^5-CO)-, -(SO_2)-, -(O-SO_2)-, -(NR^5-SO_2-)-, -O-C_6H_5-COO- or a bivalent radical of the formula



T^1 denotes -$(CH_2)_p$-, wherein the chain may be interrupted by -O-, -NR^9-, or -$OSiR^{10}{}_2O$- and may be substituted by methyl,

S^1 denotes a direct bond, -O-, -S-, or -NR^9-

p denotes an integer from 2 to 8, in particular 2 to 4,

R^9 denotes hydrogen, methyl or ethyl,

R^{10} denotes methyl or ethyl,

R^{11} to R^{22} independently of one another denote hydrogen, halogen, cyano, nitro, C_1- to C_{20}-alkyl, C_1- to C_{20}-alkoxy, phenoxy, C_3- to C_{10}-cycloalkyl, C_2- to C_{20}-alkenyl, C_6- to C_{10}-aryl, C_1- to C_{20}-alkyl-(C=O)-, C_6- to C_{10}-aryl-(C=O)-, C_1- to C_{20}-alkyl-(SO_2)-, C_1- to C_{20}-alkyl-(C=O)-O-, C_1- to C_{20}-alkyl-(C=O)-

NH-, C_6- to C_{10}-aryl-(C=O)-NH-, C_1- to C_{20}-alkyl-O-(C=O), C_1- to C_{20}-alkyl-NH-(C=O)-, or C_6- to C_{10}-aryl-NH-(C=O)-,

X^4 denotes hydrogen, halogen, cyano, nitro, CF_3, CCl_3, -COO-C_1 to C_4-alkyl or $X^{4'}$-R^4,

$X^{1'}$, $X^{2'}$ $X^{3'}$ and $X^{4'}$ denote a direct bond, -O-, -(N-R^5)-, -C(R^6R^7)-, -(C=O)-, -(CO-O)-, -(CO-NR^5)-, -(SO_2)- or (SO_2-O)- and

R^4, R^5, R^6, R^7 and R^8 independently of one another denote hydrogen, C_1- to C_4-alkyl, or C_6- to C_{10}-aryl and

R^4 and R^5 in addition independently of one another denote C_1- to C_{20}-alkyl-(C=O)-, C_3- to C_{10}-cycloalkyl-(C=O)-, C_2- to C_{20}-alkenyl-(C=O)-, C_6- to C_{10}-aryl-(C=O)-, C_1- to C_{20}-alkyl-(SO_2)-, C_3- to C_{10}-cycloalkyl-(SO_2)-, C_2- to C_{20}-alkenyl-(SO_2)-, or C_6- to C_{10}-aryl-(SO_2)-.

8. (Previously presented) Process according to Claim 1, wherein the storage medium on which information is to be written has a light-active layer of a thickness between 0.05 and 1000 μm.

9. (Previously presented) Process according to Claim 1, wherein the storage medium that is used has an optical density at the wavelength of the writing laser of the light-active layer of between 0.3 and 20.

10. (Canceled)

11. (Canceled).

12. (Previously presented) Process according to Claim 1, wherein the change in the surface topography of the storage medium is produced by laser light having wavelengths between 380 nm and 820 nm.

13. (Previously presented) Process according to Claim1, wherein the light has an intensity of between 150 μW and 100 mW and is focused on spots having a dimension (full half-value width) in a range between 10 nm and 8 μm.

14. (Previously presented) Process according to Claim 1, wherein information can be written on storage media whose carrier layer comprises a polymer.

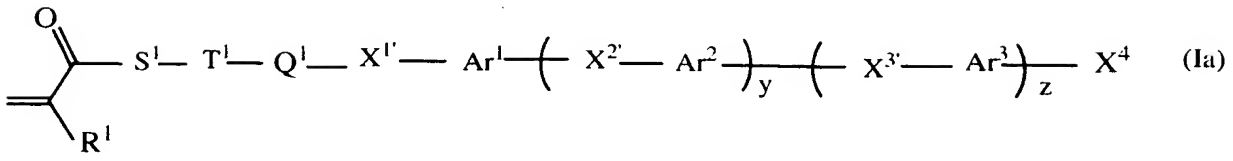
15. (Previously presented) Process according to Claim 1, a signal deviation is written in the storage medium having at least a carrier/noise ratio of 20 dB.

16. (Previously presented) Process according to Claim 1, wherein information can be written on storage media that contain, between the light active dye-containing layer and the covering layer, an additional, light-reflecting layer selected from the group consisting of aluminum, silver, and gold.

17. (Previously presented) Process according to Claim 1, wherein the storage medium on which information is to be written has no reflecting layer.

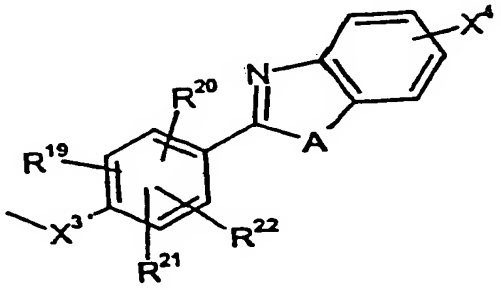
18. (Previously presented) Process according to Claim 1, the optical writing process is performed with polarised light of variable intensity, produced by a laser with an acousto-optical modulator or by modulation of a laser diode, and the polarisation state of the reflected light is detected in a polarisation optics system.

19. (Withdrawn) Monomers of the formula



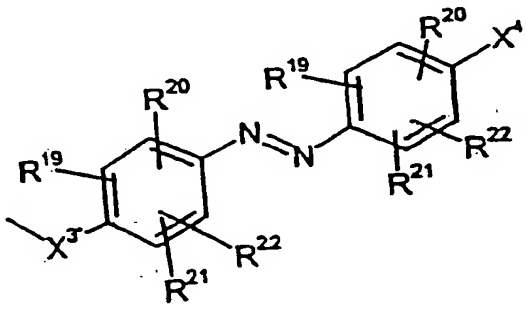
(Ia)

wherein R^1 denotes hydrogen or methyl and
the other radicals have the meanings defined in claim 6, and
$-(X^{3'}-Ar^3)_z-X^4$ denotes a radical of the formula



$X^{3'}$ denotes –N=N- or –CO-NH-.

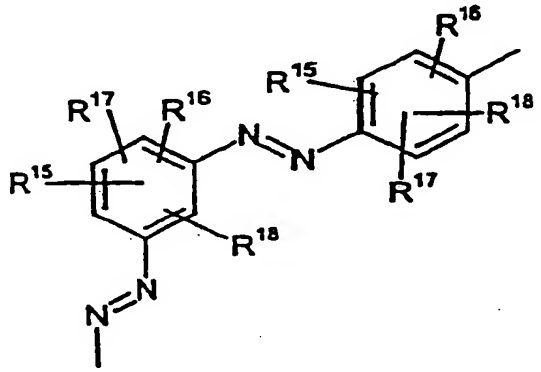
20. (Withdrawn) Monomers of the formula (Ia) according to claim 19, wherein
$-(X^{3'}-Ar^3)_z-X^4$ denotes a radical of the formula



$X^{3'}$ denotes -O-, $-(SO_2)-$, -(C=O)-, $-(N-R^5)-$, $-(CO-NR^5)-$ or $-C(R^6R^7)-$.

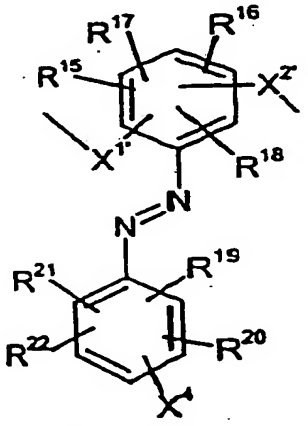
21. (Withdrawn) Monomers of the formula (Ia) according to claim 19, wherein

$-(X^{2'}-Ar^{2})_{y}-$ denotes a bivalent radical of the formula



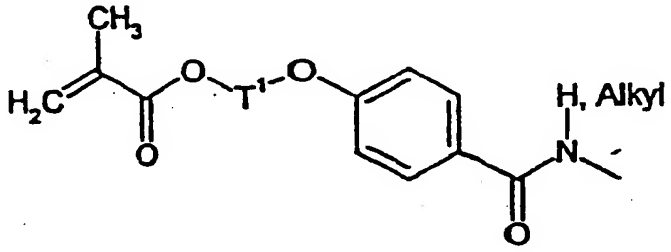
22. (Withdrawn) Monomers of the formula (Ia) according to claim 19, wherein

$-(X^{1'}-Ar^{1})-X^{2'}$ denotes a bivalent radical of the formula



wherein $X^{1'}$ and $X^{2'}$ are in the m- or p-position relative to one another and $X^{1'}$ and the azo group are in the o- or p-position relative to one another.

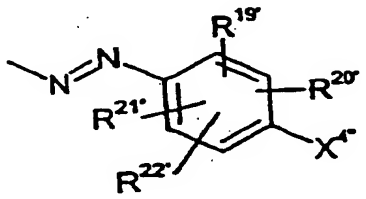
23. (Withdrawn) Monomers of the formula



$X^{2'}$ denotes –N=N- or –CO-NH-,

X^4 denotes hydrogen, C_1- to C_4- alkoxy, Di-C_1- to C_4-alkylamino, C_1-, to C_4-alkanoylamino, benzoylamino, cyano or nitro, wherein X^4 is particularly preferably in the p-position to the azo group,

R^{15} to R^{22} independently of one another denote hydrogen, methyl, methoxy or cyano, wherein one of the radicals R^{19} to R^{22} may denote a radical of the formula



which is particularly preferably in the m- or p-position relative to the azo group, in which

$X^{4''}$ denotes hydrogen, C_1- to C_4-alkoxy, Di-C_1- to C_4-alkylamino, C_1- to C_4-alkanoylamino, benzoylamino, cyano or nitro and

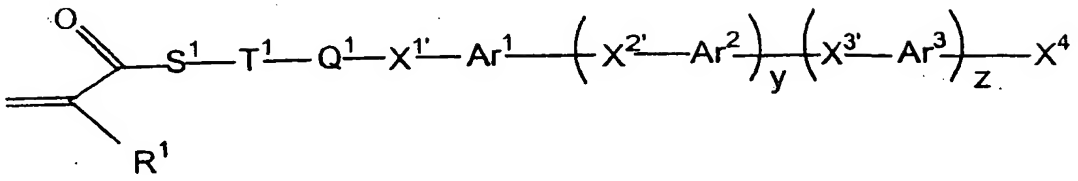
$R^{19'}$ to $R^{22'}$ independently of one another denote hydrogen, methyl, methoxy or cyano.

24. (Withdrawn) Polymers produced from monomers according to one or more of the preceding claims.

25. (Canceled)

26. (Canceled)

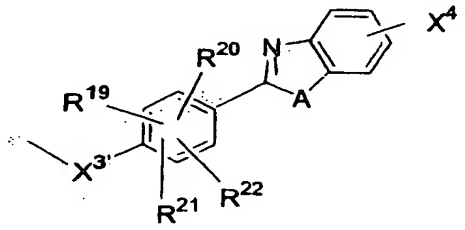
27. (Withdrawn) Monomers of the formula



(Ia)

wherein R^1 denotes hydrogen or methyl and the other radicals have the meanings as defined in Claim 7, and

$-(X^{3'}-Ar^3)_z-X^4$ denotes radicals of the formula



and $X^{3'}$ denotes —N=N— or —CO—NH— .

28. (Withdrawn) A method of using the monomers of claim 19 comprising producing an optical storage medium.

29. (Previously presented) The storage medium prepared by the method of Claim 18.

30. (New) The process of Claim 1 wherein said reading is carried out without substantial portions of the detected signal resulting from a degradation and/or a physical or chemical modification of the areas adjacent to the absorber layer.